

# **An Intelligent Online System for Enhanced Recruitment of Patients for Clinical Research**

Yugyung Lee<sup>1</sup>, Deendayal Dinakarbandian<sup>1</sup>, John Wubbenhorst<sup>2</sup>, Dennis Owens<sup>2</sup>

<sup>1</sup>School of Computing and Engineering, University of Missouri-Kansas City

<sup>2</sup>Midwest Psychiatric Research Group

The recruitment and retention of subjects for clinical research has been identified as one of the bottlenecks in the development of new drugs and treatments by the healthcare industry. The Kansas City Area Life Sciences Institute has been instrumental in bringing together the Midwest Psychiatric Research Group and researchers from the School of Computing and Engineering at the University of Missouri-Kansas City to address this important problem. The resulting academic-corporate partnership has been funded by a 2-year Small Business Innovation Research Grant of \$518,298 awarded by the National Institute of Mental Health at the National Institutes of Health.

The project is based on developing and employing a novel internet-based system to enhance the voluntary enrollment of research subjects for studies conducted by Clinical Research Organizations. This will proactively engage patients and their caregivers who desire to be informed about clinical trials that might be relevant for their specific diagnoses, disease states and other characteristics. An important goal of the project is to facilitate accurate matches between the requirements of a clinical research study and the profile of research volunteers. To achieve this, state of the art knowledge representation and search techniques are being employed. Phase I of the project is focused on the development of a system for recruitment for clinical research trials on "Generalized Anxiety Disorder," with eventual expansion to the inclusion of volunteers for studies on other mental health disorders.